What is claimed is:

1. A method for the creation of a torch bump, comprising the steps of:
providing a substrate, said substrate having been provided with a contact pad over the surface thereof, a patterned and etched layer of passivation having been deposited over the surface of the substrate, exposing the surface of said contact pad, a layer of UBM having been blanket deposited over the surface of the layer of passivation including the exposed surface of the contact pad;
creating a base of said torch bump overlying said contact pad using a patterned and developed first layer of dry film as a mask;
creating a layer of solder of said torch bump overlying said base using a patterned and developed second layer of dry film as a mask;
removing said patterned and developed first and second layers of dry film, and
applying reflow to said layer of solder.

2. The method of claim 1, said creating a base of said torch bump comprising the steps of:
depositing a first layer of dry film over the surface of said layer of UBM;
patterning and developing said first layer of dry film, creating an opening through said first layer of dry that aligns with said contact pad, creating a first mask of dry film, exposing said layer of UBM; and
depositing successive layers of metal over the exposed surface of said layer of UBM in accordance with the opening created through said first mask of dry film.

3. The method of claim 2, said successive layers of metal comprising:
a first layer of copper deposited over the exposed surface of said layer of UBM;
a second layer of nickel deposited over said first layer of copper; and
a third layer of gold deposited over the surface of said second layer of nickel.

4. The method of claim 3, said first layer of copper being deposited to a thickness of about 90 μm.

5. The method of claim 3, said second layer of nickel being deposited to a thickness of

about 5 μm.

6. The method of claim 3, said third layer of gold being deposited to a thickness of about 5 μm.

7. The method of claim 1, said creating a layer of solder comprising the steps of:
depositing a second layer of dry film over the surface of said first layer of dry film, thereby including the surface of said base;
patterning and developing said second layer of dry film, creating an opening through said second layer of dry that aligns with said base of said torch bump, creating a second mask of dry film, exposing said base of said torch bump; and
depositing a layer of solder in accordance with the opening created through said second mask of dry film.

8. The method of claim 2, said successive layers of metal comprising:
a first layer of solder deposited over the exposed surface of said layer of UBM; and
a second layer of eutectic solder paste deposited over said first layer of solder.

9. The method of claim 8, whereby additionally a layer of nickel is deposited over the surface of said first layer of solder after which a layer of gold is deposited over the surface of said layer of nickel after which said second layer of eutectic solder paste is deposited over the surface of said layer of gold.

10. The method of claim 1, said layer of UBM comprising nickel.

11. The method of claim 10, said nickel being deposited to a thickness between about 1 and 10 μm.

12. The method of claim 1, with an additional step of etching said layer of UBM using said created base of said torch bump and said created layer of solder as a mask.

13. The method of claim 12, said etching said layer of UBM comprising a wet etch

process.

14. The method of claim 1, parameters of first and second dry film thickness in combination with parameters of said first layer of dry film as a mask and said second layer of dry film as a mask being selected such that the diameter of the base of said torch bump is larger than the largest diameter of the solder ball of said torch bump which is larger than the diameter of the contact surface between the solder ball and the base of the torch bump.

15. The method of claim 1, parameters of first and second dry film thickness in combination with parameters of said first layer of dry film as a mask and said second layer of dry film as a mask being selected such that the diameter of the base of the torch bump is equal to the largest diameter of the solder ball which is larger than the diameter of the contact surface between the solder ball and the base of the torch bump.

16. The method of claim 1, parameters of first and second dry film thickness in combination with parameters of said first layer of dry film as a mask and said second layer of dry film as a mask being selected such that the diameter of the base of the torch bump is smaller than the largest diameter of solder ball of the torch bump.

17. A method for the creation of a torch bump, comprising the steps of:

providing a substrate, said substrate having been provided with a contact pad over the surface thereof, a patterned and etched layer of passivation having been deposited over the surface of the substrate, exposing the surface of said contact pad, a layer of UBM having been blanket deposited over the surface of the layer of passivation including the exposed surface of the contact pad.;

depositing a first layer of dry film over the surface of said layer of UBM;

patterning and etching said first layer of dry film, creating an opening through said first layer of dry film that aligns with said contact pad, thereby exposing the surface of said layer of UBM, creating a first mask of dry film;

electroplating at least one layer of metal over the exposed surface of said layer of

UBM;

depositing a second layer of dry film over the surface of said first layer of dry film;

patterning and etching said second layer of dry film, creating an opening through said second layer of dry film that aligns with said contact pad, thereby exposing the surface of said at least one layer of metal electroplated over the exposed surface of said layer of UBM, creating a second mask of dry film;

depositing a layer of solder in said opening created through said second layer of dry film;

removing said first mask and said second mask of dry film from the surface of said layer of UBM;

etching said layer of UBM using said at least one layer of metal electroplated and said deposited layer of solder as a mask; and

applying reflow to said deposited layer of solder.

18. The method of claim 17, said electroplating at least one layer of metal comprising:
a first layer of copper deposited over the exposed surface of said layer of UBM;
a second layer of nickel deposited over said first layer of copper; and
a third layer of gold deposited over the surface of said second layer of nickel.

19. The method of claim 18, said first layer of copper being deposited to a thickness of about 90 μm.

20. The method of claim 18, said second layer of nickel being deposited to a thickness of about 5 μm.

21. The method of claim 18, said third layer of gold being deposited to a thickness of about 5 μm.

22. The method of claim 17, said electroplating at least one layer of metal comprising:
a first layer of solder deposited over the exposed surface of said layer of UBM; and
a second layer of eutectic solder paste deposited over said first layer of solder.

23. The method of claim 22, whereby additionally a layer of nickel is deposited over

the surface of said first layer of solder after which a layer of gold is deposited over the surface of said layer of nickel after which said second layer of eutectic solder paste is deposited over the surface of said layer of gold.

24. The method of claim 17, said layer of UBM comprising nickel.

25. The method of claim 24, said nickel being deposited to a thickness between about 1 and 10 μm.

26. The method of claim 17, said etching said layer of UBM comprising a wet etch process.

27. The method of claim 17, parameters of first and second dry film thickness in combination with parameters of said first layer of dry film as a mask and said second layer of dry film as a mask being selected such that the diameter of the base of said torch bump is larger than the largest diameter of the solder ball of said torch bump which is larger than the diameter of the contact surface between the solder ball and the base of the torch bump.

28. The method of claim 17, parameters of first and second dry film thickness in combination with parameters of said first layer of dry film as a mask and said second layer of dry film as a mask being selected such that the diameter of the base ot the torch bump is equal to the largest diameter of the solder ball which is larger than the diameter of the contact surface between the solder ball and the base of the torch bump.

29. The method of claim 17, parameters of first and second dry film thickness in combination with parameters of said first layer of dry film as a mask and said second layer of dry film as a mask being selected such that the diameter of the base of the torch bump is smaller than the largest diameter of solder ball of the torch bump.

30. A structure for a torch bump, comprising:

a substrate, said substrate having been provided with a contact pad over the surface thereof, a patterned and etched layer of passivation having been deposited over the surface of the substrate, exposing the surface of said contact pad, a layer of UBM having been blanket deposited over the surface of the layer of passivation including the exposed surface of the contact pad;

a base of said torch bump having been created overlying said contact pad using a patterned and developed first layer of dry film as a mask;

a layer of solder of said torch bump having been created overlying said base using a patterned and developed second layer of dry film as a mask;

said patterned and developed first and second layers of dry film having been removed; and

reflow having been applied to said layer of solder.

31. The structure of claim 30, said base of said torch bump having been created comprising:

a first layer of dry film having been deposited over the surface of said layer of UBM;

said first layer of dry film having been patterned and developed, having created an opening through said first layer of dry that aligns with said contact pad, having created a first mask of dry film, exposing said layer of UBM; and

successive layers of metal having been deposited over the exposed surface of said layer of UBM in accordance with the opening created through said first mask of dry film.

32. The structure of claim 31, said successive layers of metal comprising:

a first layer of copper having been deposited over the exposed surface of said layer of UBM;

a second layer of nickel having been deposited over said first layer of copper; and

a third layer of gold having been deposited over the surface of said second layer of nickel.

33. The structure of claim 32, said first layer of copper having been deposited to a thickness of about 90 μm.

34. The structure of claim 32, said second layer of nickel being deposited to a thickness of about 5 μm.

35. The structure of claim 32, said third layer of gold having been deposited to a thickness of about 5 μm.

36. The structure of claim 30, said layer of solder having been created by:
a second layer of dry film having been deposited over the surface of said first layer of dry film, thereby including the surface of said base;
said second layer of dry film having been patterned and developed, having created an opening through said second layer of dry that aligns with said base of said torch bump, having created a second mask of dry film, having exposed said base of said torch bump; and
a layer of solder having been developed in accordance with the opening created through said second mask of dry film.

37. The structure of claim 31, said successive layers of metal comprising:
a first layer of solder having been deposited over the exposed surface of said layer of UBM; and
a second layer of eutectic solder paste having been deposited over said first layer of solder.

38. The structure of claim 37, whereby additionally a layer of nickel having been deposited over the surface of said first layer of solder after which a layer of gold having been deposited over the surface of said layer of nickel after which said second layer of eutectic solder paste having been deposited over the surface of said layer of gold.

39. The structure of claim 30, said layer of UBM comprising nickel.

40. The structure of claim 39, said nickel having been deposited to a thickness between about 1 and 10 μm.

41. The structure of claim 30, additionally said layer of UBM having been etched. using said created base of said torch bump and said created layer of solder as a mask.

42. The structure of claim 41, said etching said layer of UBM comprising a wet etch process.

43. The structure of claim 30, parameters of first and second dry film thickness in combination with parameters of said first layer of dry film as a mask and said second layer of dry film as a mask having been selected such that the diameter of the base of said torch bump is larger than the largest diameter of the solder ball of said torch bump which is larger than the diameter of the contact surface between the solder ball and the base of the torch bump.

44. The structure of claim 30, parameters of first and second dry film thickness in combination with parameters of said first layer of dry film as a mask and said second layer of dry film as a mask having been selected such that the diameter of the base of the torch bump is equal to the largest diameter of the solder ball which is larger than the diameter of the contact surface between the solder ball and the base of the torch bump.

45. The structure of claim 30, parameters of first and second dry film thickness in combination with parameters of said first layer of dry film as a mask and said second layer of dry film as a mask having been selected such that the diameter of the base of the torch bump is smaller than the largest diameter of solder ball of the torch bump.